

Claims

What is claimed is:

1 1. A method of managing input/output (I/O)
2 configurations of a computing environment, said method
3 comprising:

4 selecting a channel path from a plurality of
5 channel paths to be used in adjusting an I/O
6 configuration of said computing environment, said
7 selecting being based on one or more characteristics
8 associated with said channel path; and

9 dynamically adjusting said I/O configuration using
10 the selected channel path.

1 2. The method of claim 1, wherein said dynamically
2 adjusting comprises attaching the selected channel path to a
3 subsystem of said I/O configuration.

1 3. The method of claim 2, wherein said selected
2 channel path and said subsystem are associated with a
3 workload executing within at least one logical partition of
4 said computing environment, and wherein the dynamically
5 adjusting provides additional resources to said workload.

1 4. The method of claim 3, wherein said selected
2 channel path was removed from another workload executing
3 within at least one logical partition, thereby reducing
4 resources of said another workload.

1 5. The method of claim 1, wherein said dynamically
2 adjusting comprises removing attachment of the selected
3 channel path from a subsystem of said I/O configuration.

1 6. The method of claim 1, wherein said one or more
2 characteristics include at least one of an impact on
3 response time, an impact on response time to achieve
4 specific workload goals, contention on a subsystem of said
5 I/O configuration, availability characteristics of said
6 channel path, and complexity of the resulting I/O
7 configuration.

1 7. The method of claim 1, further comprising
2 determining that said I/O configuration is to be adjusted.

1 8. The method of claim 7, wherein said determining
2 comprises using one or more workload goals in making the
3 determination.

1 9. The method of claim 8, wherein the one or more
2 workload goals are associated with workloads of a group of
3 partitions of said computing environment.

1 10. The method of claim 7, wherein said determining
2 comprises consulting with one or more workload managers of
3 said computing environment in making the determination.

1 11. The method of claim 7, wherein said determining
2 comprises using measured subsystem performance being within
3 an average target range in making the determination.

1 12. The method of claim 1, further comprising
2 projecting an impact of the adjustment on one or more
3 subsystems to be effected by the adjustment, prior to said
4 dynamically adjusting.

1 13. The method of claim 12, further comprising
2 dynamically adjusting when the impact is acceptable.

1 14. A system of managing input/output (I/O)
2 configurations of a computing environment, said system
3 comprising:

4 means for selecting a channel path from a
5 plurality of channel paths to be used in adjusting an
6 I/O configuration of said computing environment, the
7 selecting being based on one or more characteristics
8 associated with said channel path; and

9 means for dynamically adjusting said I/O
10 configuration using the selected channel path.

1 15. The system of claim 14, wherein said means for
2 dynamically adjusting comprises means for attaching the
3 selected channel path to a subsystem of said I/O
4 configuration.

1 16. The system of claim 15, wherein said selected
2 channel path and said subsystem are associated with a
3 workload executing within at least one logical partition of
4 said computing environment, and wherein the dynamically
5 adjusting provides additional resources to said workload.

1 17. The system of claim 15, wherein said selected
2 channel path was removed from another workload executing
3 within at least one logical partition, thereby reducing
4 resources of said another workload.

1 18. The system of claim 14, wherein said means for
2 dynamically adjusting comprises means for removing
3 attachment of the selected channel path from a subsystem of
4 said I/O configuration.

1 19. The system of claim 14, wherein said one or more
2 characteristics include at least one of an impact on
3 response time, an impact on response time to achieve
4 specific workload goals, contention on a subsystem of said
5 I/O configuration, availability characteristics of said
6 channel path, and complexity of the resulting I/O
7 configuration.

1 20. The system of claim 14, further comprising means
2 for determining that said I/O configuration is to be
3 adjusted.

1 21. The system of claim 20, wherein said means for
2 determining comprises means for using one or more workload
3 goals in making the determination.

1 22. The system of claim 21, wherein the one or more
2 workload goals are associated with workloads of a group of
3 partitions of said computing environment.

1 23. The system of claim 20, wherein said means for
2 determining comprises means for consulting with one or more
3 workload managers of said computing environment in making
4 the determination.

1 24. The system of claim 20, wherein said means for
2 determining comprises means for using measured subsystem
3 performance being within an average target range in making
4 the determination.

1 25. The system of claim 14, further comprising means
2 for projecting an impact of the adjustment on one or more
3 subsystems to be effected by the adjustment, prior to the
4 dynamically adjusting.

1 26. The system of claim 25, further comprising
2 dynamically adjusting when the impact is acceptable.

1 27. A system of managing input/output (I/O)
2 configurations of a computing environment, said system
3 comprising:

4 a processor adapted to select a channel path from
5 a plurality of channel paths to be used in adjusting an
6 I/O configuration of said computing environment, the
7 selecting being based on one or more characteristics
8 associated with said channel path; and

9 a processor adapted to dynamically adjust said I/O
10 configuration using the selected channel path.

1 28. At least one program storage device readable by a
2 machine, tangibly embodying at least one program of
3 instructions executable by the machine to perform a method
4 of managing input/output (I/O) configurations of a computing
5 environment, said method comprising:

6 selecting a channel path from a plurality of
7 channel paths to be used in adjusting an I/O
8 configuration of said computing environment, said
9 selecting being based on one or more characteristics
10 associated with said channel path; and

11 dynamically adjusting said I/O configuration using
12 the selected channel path.

1 29. The at least one program storage device of claim
2 28, wherein said dynamically adjusting comprises attaching
3 the selected channel path to a subsystem of said I/O
4 configuration.

1 30. The at least one program storage device of claim
2 29, wherein said selected channel path and said subsystem
3 are associated with a workload executing within at least one
4 logical partition of said computing environment, and wherein
5 the dynamically adjusting provides additional resources to
6 said workload.

1 31. The at least one program storage device of claim
2 30, wherein said selected channel path was removed from
3 another workload executing within at least one logical
4 partition, thereby reducing resources of said another
5 workload.

1 32. The at least one program storage device of claim
2 28, wherein said dynamically adjusting comprises removing
3 attachment of the selected channel path from a subsystem of
4 said I/O configuration.

1 33. The at least one program storage device of claim
2 28, wherein said one or more characteristics include at
3 least one of an impact on response time, an impact on
4 response time to achieve specific workload goals, contention
5 on a subsystem of said I/O configuration, availability
6 characteristics of said channel path, and complexity of the
7 resulting I/O configuration.

1 34. The at least one program storage device of claim
2 28, wherein said method further comprises determining that
3 said I/O configuration is to be adjusted.

1 35. The at least one program storage device of claim
2 34, wherein said determining comprises using one or more
3 workload goals in making the determination.

1 36. The at least one program storage device of claim
2 35, wherein the one or more workload goals are associated
3 with workloads of a group of partitions of said computing
4 environment.

1 37. The at least one program storage device of claim
2 34, wherein said determining comprises consulting with one
3 or more workload managers of said computing environment in
4 making the determination.

1 38. The at least one program storage device of claim
2 34, wherein said determining comprises using measured
3 subsystem performance being within an averaged target range
4 in making the determination.

1 39. The at least one program storage device of claim
2 34, wherein said method further comprises projecting an
3 impact of the adjustment on one or more subsystems to be
4 effected by the adjustment, prior to said dynamically
5 adjusting.

1 40. The at least one program storage device of claim
2 39, wherein said method further comprises dynamically
3 adjusting when the impact is acceptable.

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